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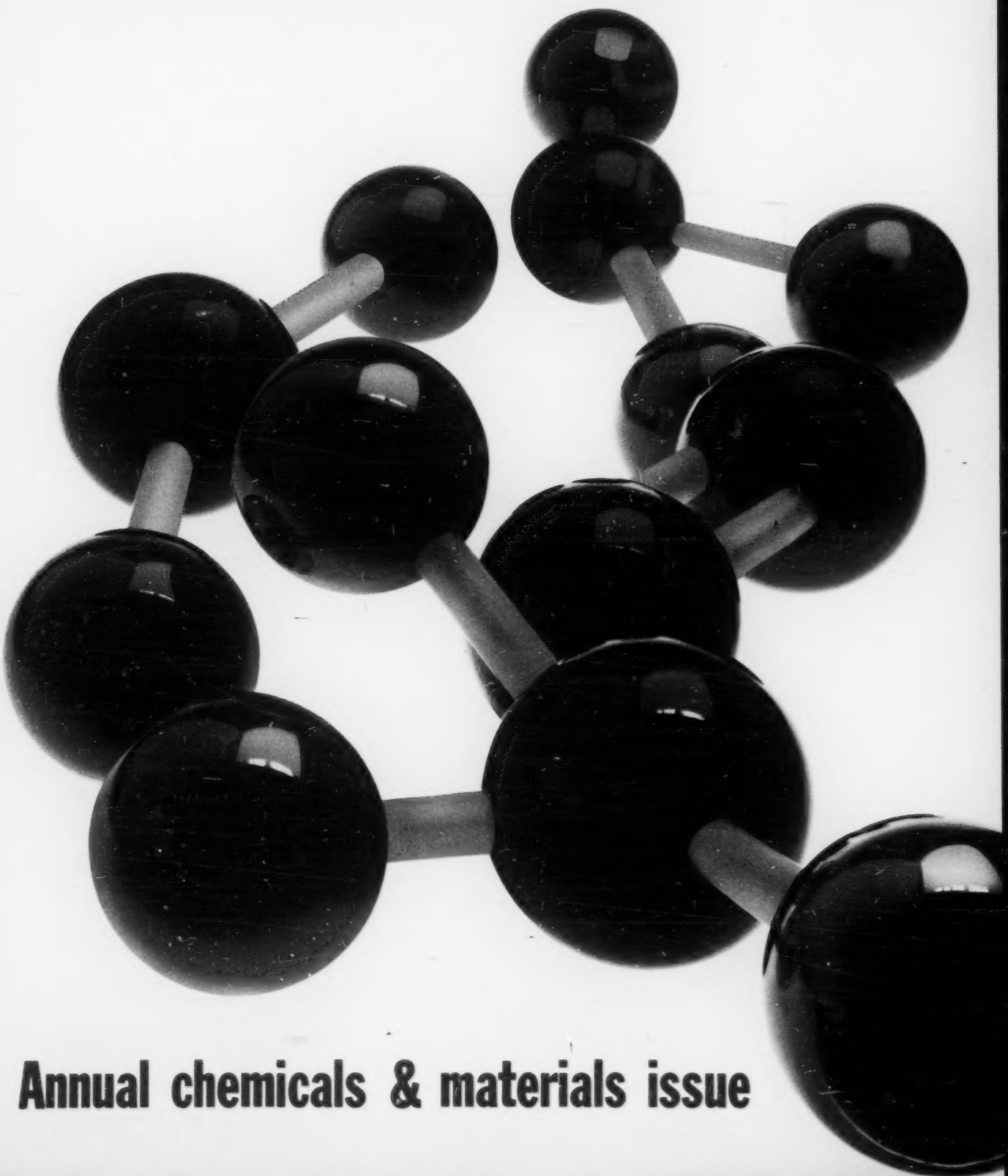
RubberWorld

The technical service magazine for the rubber industry

Volume 195, No. 1

October 1986



Annual chemicals & materials issue

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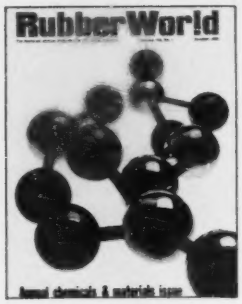

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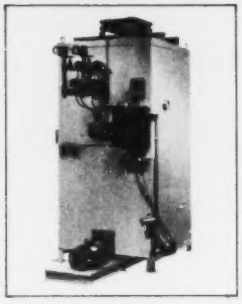

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by David Crosby, Crosby & Co. A look at what are generally the weak spots in quality improvement activity.

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by Bill Stahr, Brad & Associates. The two upcoming urethane industry meetings are previewed.

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by A.B. Sullivan, Eiichi Morita and R.I. Leib, Monsanto Chemical Company. Article describes development of hexa (isopropylthio)-melamine and shows that the overall reactivity with MBT is similar to that of CTP (N-cyclohexylthiophthalimide) and has the same inhibitor activity (per equivalent of S-N) as CTP in various polymer and accelerator systems.

29 CPE thiadiazole cure system studies - chemistry and dispersion

by William H. Davis, Jr., Dow Chemical U.S.A. and James H. Flynn, Teknor Apex. Authors discuss thiadiazole cure systems for CPE that provide more flexibility than peroxide-based cure systems. They also discuss a mechanistic study of the cure system and significant improvements in scorch safety and shelf life by using magnesium hydroxide as the inorganic base in this system.

35 New considerations in the selection of fluorocarbon elastomers for seal applications

by Robert A. Brullo and Allen M. Sohio, 3M. Preconditioned motor oils were used to study the effects on fluoroelastomer compounds used in oil seals. Fluoroelastomer parameters to prevent oil additive attack were determined and used to devleop oil seal compounding guidelines.

39 Recent advances in thermal black

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New equipment, instruments, CAD/CAM, products and materials

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Cover: Cover courtesy of Kent Latex Inc.

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Business Briefs

its headquarters to Charlotte, NC.

General Tire is undergoing a multi-million dollar farm tire expansion at its Mayfield, KY facility. The expansion is expected to be completed by next spring and will mean the addition of 125 new employees.

Carlisle SynTec Systems opened its Fredricksburg, VA distribution center which will stock the company's complete line of single-ply roofing membrane, adhesives and sealants.

Smith & Nephew of Great Britain purchased **Richards Medical Co.**, Memphis, TN, an orthopedic products company with six U.S. manufacturing plants and three in Europe and subsidiaries in 10 other countries.

BTL Industries completed acquisition of the majority of the businesses formerly comprising the specialty phenolics division of **Reichhold Chemicals** and has formed BTL Specialty Resins Corp.

RMA rubber report through June (figures in metric tons)

	cumulative 1986	cumulative 1985	% change
Total new rubber			
New rubber available	1,552,126	1,542,424	.63
Imports	542,101	574,702	-5.67
Exports	191,008	188,247	1.47
Apparent consumption	1,329,462	1,341,029	-.85
Total natural rubber			
Imports	405,802	434,940	-6.70
Exports	19,839	20,432	-2.90
Apparent consumption	384,482	415,195	-7.40
%total new rubber	28.92	30.96	
Total synthetic rubber			
Production	1,010,025	967,722	4.37
Imports	136,299	139,762	-2.48
Exports	171,169	167,815	2.00
Apparent consumption	944,980	925,833	2.07
Total SBR			
Production	386,138	392,921	-1.73
Imports	53,622	46,775	14.64
Exports	48,669	42,381	14.84
Apparent consumption	380,552	398,696	-4.55
Total nitrile			
Production	32,454	28,391	10.42
Imports	6,218	6,510	-4.49
Exports	5,146	3,429	50.07
Apparent consumption	32,062	31,448	1.95
Polybutadiene			
Production	177,898	180,020	-1.18
Imports	27,331	36,327	-24.76
Exports	11,052	12,374	-10.68
Apparent consumption	177,543	197,882	-10.28
Ethylene-propylene			
Production	118,078	120,957	-2.38
Imports	2,264	503	350.10
Exports	23,171	17,175	34.91
Apparent consumption	94,878	95,872	-1.04
Butyl, polychloroprene, polyisoprene, silicone and other synthetic elastomers			
Production	295,458	244,432	20.88
Imports	46,864	49,647	-5.61
Exports	83,131	92,456	-10.09
Apparent consumption	259,946	201,933	28.73

Contracts, licenses

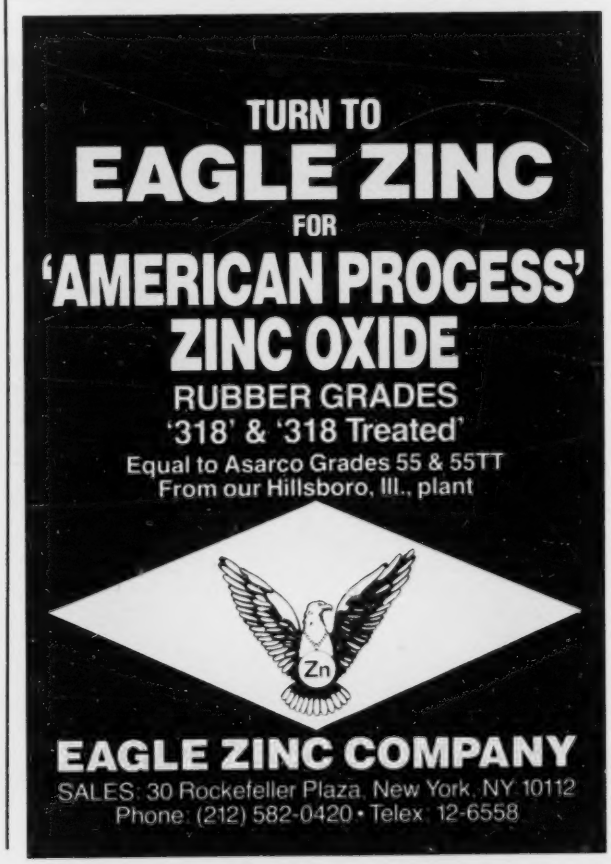
KMG Minerals, formerly English Mica, appointed **Walsh and Associates**, St. Louis, MO as a stocking distributor for its products.

Financial statements

The British Petroleum Co. reported a profit for the quarter ending June 30 of $317 million on revenues of $9.5 billion.

Cabot Corp. had a third quarter net income of $13.1 million on sales of $310.1 million.

Eagle-Picher reported net income for the third quarter of $9.4 million on sales of $153.7 million.



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Business Briefs

GenCorp reported third quarter net income of $38 million on net sales of $807 million.

NL Industries had a second quarter net loss of $50.4 million on sales of $315.9 million.

Markets, news

Rapra, the Rubber and Plastics Research Association of Great Britain estimates that the free world market for specialty elastomers, excluding chlorinated PE is between 165,000-185,000 metric tons per year. This represents 1.8% of total rubber consumption of 9.5 million tons according to *Specialty and high perfomance rubbers*, a business report prepared by the group. In terms of value, these rubbers account for sales of $900 million to $1.05 billion which is about 7-8% of total rubber markets and about 10% of total synthetic rubber usage. Silicones make up the largest volume with approximately 60,000 tons consumed in 1985. Chlorosulphonated PE was next with 40,000-50,000; acrylics at 30,000; copolyester/polyethers at 15,000; epichlorohydrin with 10,000-15,000; polysulfides at 5,000-10,000, fluoroelastomes at 5,000; polynorbornene between 1,000-2,000, and propylene oxide copolymers accounted for less than 1,000 tons. Although fluoroelastomers ranked sixth in volume it was placed second according to value by the report.

Bayer AG predicts usage of thermoplastics will reach 4.7 million tons by 1990, a half million ton increase from 1985 consumption. The company also sees consumption of polyurethanes increasing to 4.5 million tons in 1990 from 1985's level of 3.6 million tons.

Goodyear is phasing out its machinery fabricating division in Akron stating that fabricating and assembling complete machines or tooling fixtures at the plant for shipment to various plants is no longer compatible with new methods for installation of integrated manufacturing systems in today's modern plants The phaseout affects 188 employees while 87 jobs will be preserved by an $8.9 million investment in a new machine and systems development facility in Akron.

Lydall Inc. will close the Chicago, IL plant of its elastomer products group by the end of this year. The plant has been a manufacturer of molded rubber parts for nearly 35 years.

Goodyear is urging renegotiation of the International Natural Rubber Organization (INRO) treaty to avoid what it calls havoc in the market, economic repercussion in the rubber producing nations and possible jeopardy to the long term supply outlook. Failing that, Goodyear said that member nations of the INRO treaty should institute an orderly release of natural rubber buffer stocks when the current agreement expires in October 1987.

The price for RSS 1 natural rubber reached .4675 cents per pound on Sept. 26, its highest mark since August of 1984. Prices for RSS 1 had bottomed out at 39 cents per pound on May 2 of this year. Prices for RSS 1 were near 60 cents per pound in January 1984.

RMA tire report through July
(figures in thousands of units)

Passenger tires	YTD 1986	YTD 1985	%change
Shipments			
Original equipment	32,602	32,906	-0.92
Radial	27,330	25,446	7.40
Replacement	74,438	84,401	-11.80
Radial	63,819	63,171	1.03
Export	2,175	3,507	-37.98
Radial	1,646	2,592	-36.50
Total	109,215	120,814	-9.60
Radial	92,795	91,209	1.74
Production	91,172	101,247	-9.95
Radial	77,033	75,661	1.81
Truck & bus tires			
Shipments			
Original equipment	4,138	4,582	-9.69
Radial	2,749	2,869	-4.18
Replacement	16,161	17,971	-10.07
Radial	7,619	7,625	-0.08
Export	762	797	-4.39
Radial	466	405	15.06
Total	21,061	23,350	-9.80
Radial	10,834	10,899	-0.60
Production	17,956	20,161	-10.94
Radial	8,657	8,740	-0.95

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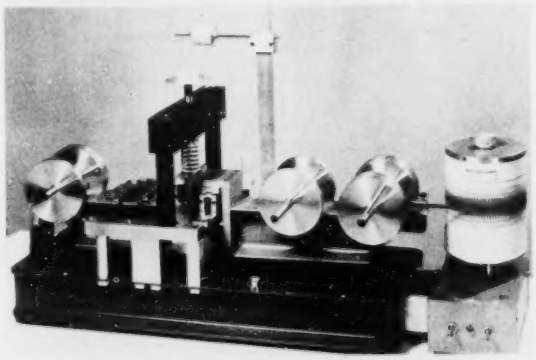

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